

How do I read and write Roman numerals?

A numeral is a symbol used to represent a number. (Our digits 0-9 are often called Arabic numerals.) Each letter used in Roman numerals stands for a different number:

Roman Numeral	Number
I	1
V	5
X	10
L	50
C	100
D	500
M	1000

A string of letters means that their values should be added together. For example, XXX = 10 + 10 + 10 = 30, and LXI = 50 + 10 + 1 = 61. If a smaller value is placed *before* a larger one, we subtract instead of adding. For instance, IV = 5 - 1 = 4.

You can use these rules to write a number in Roman numerals. Convert one digit at a time. Let's try 982:

$$\begin{aligned}982 &= 900 + 80 + 2 \\&= \text{CM} + \text{LXXX} + \text{II} \\&= \text{CMLXXXII}.\end{aligned}$$

What are the rules for subtracting letters? Can I write MIM for 1999? What about IIII for 4?

Here are the official rules for subtracting letters:

- Subtract only powers of ten, such as I, X, or C. Writing VL for 45 is not allowed: write XLV instead.
- Subtract only a single letter from a single numeral. Write VIII for 8, not IIX; 19 is XIX, not IXX.
- Don't subtract a letter from another letter more than ten times greater. This means that you can only subtract I from V or X, and X from L or C, so MIM is illegal.

How do I write large numbers?

The biggest Roman numeral is M, for 1000, so one easy way to write large numbers is to line up the Ms: MMMMMMMM would be 7000, for instance. This system gets cumbersome quickly. When they needed to work with many large numbers, the Romans often wrote a bar above a numeral. The bar meant to multiply by 1000. Using this method, 7000 would be **VII**.